Red and White

A captain's guide to advanced gateball strategy

The game of gateball is a deeply nuanced and subtle game. The strategies employed by successful teams can be very hard to see in real time during a game. A strong team's success often stems from actions taken well before the killer blow (or gate-touch) is made. But how can a new captain watch a game and learn from it if the key moves are below the surface and easily missed?

This guide is designed to fill that gap. It is written to help existing Gateball captains to improve and deepen their understanding of the game.

This guide is about strategy, not tactics. A tactic is a small idea useful in a particular situation. A strategy is a larger idea that guides decisions in multiple situations. This guide will focus on strategies and analysis – it will discuss tactics only in passing.

We assume you already know that gate-touches are valuable and you should set a gate-touch if the opportunity presents. But how did you come to have two (or even three) balls near the gate in the first place, such that setting a gate-touch was even a possibility? That's a question of strategy, not tactics.

In this guide we will focus on understanding the game of gateball. With a better understanding of the nuance, captains can learn to identify the opportunities for their own team in any situation and see the developing threats from the opposition.

We hope that many captains will be at least partially aware of most of the concepts which follow. However, by naming the concepts and explaining them, we can shed light on how these ideas combine and interact – and show how to apply these ideas in the new situations which the game, inevitably, throws at us.

The other reason to name and explain these ideas is that everyone – not just the captain – is aware of them. It is vitally important for a team to have a common language when discussing the game. 10 seconds isn't very long for the captain to give complicated instructions and so a mutual language assists a team greatly.

The Game of Gateball – How a Captain Can Help Improve Their Team

The game of gateball is, first and foremost, a team game. The red balls play against the white balls.

Teams can improve a little if each member of the team becomes better at basic skills. Where the captain is also the coach, this can mean teaching skills and designing drills. These improvements in skills are worthwhile and should be encouraged. But you knew that already.

However, for most teams there is more improvement available by improving the co-operation skills of the team than by improving the skills of individual players. This ability to bring the most out of the combinations of balls – rather than a single player – is the art of gateball strategy.

Notice that the word "strategy" is chosen very deliberately instead of the word "captaincy".

It is the captain's task to make the final decisions, but a team's strategy is not a task that sits solely with the captain. Just as every ball must contribute to the team's success on the field, every player must contribute to their team's strategy and tactics. This can be as much as suggesting entire sequences to the captain, or as little as keeping track of their own ball's score.

Strategy assistance can also be a simple assessment of a situation on the far side of the field to the captain. In following sections we will discuss the importance of angles, particularly angles through gates and gate-touches. A captain should not be running around the entire court assessing those angles – particularly not if there is a member of their team much closer who could make the assessment.

Every little bit of assistance helps. This does not just apply during a single game. Players who routinely track the game at a strategic level and make tactical suggestions are far more able to step up and fill in as captain should the need ever arise.

The winning team will almost always be the team whose balls co-operate best. There are many strategies in gateball which involve multiple balls interacting and co-operating. This applies to both shot-making and turn-order. To understand these strategies it is critical that a captain conceive of their team as a team, not as a collection of individual balls. This also requires individual players to understand that sometimes they're the star, and sometimes they're the support act. The focus must be on the team.

For captains, the question is not "What can ball 1 achieve?" and then "What can ball 3 achieve?". Rather, the question is "What can balls 1 and 3 achieve together?

The game of gateball is also cumulative. When strong evenly matched teams are playing it is unlikely to be a single wonderful shot or idea that turns the game. Instead, it is far more likely that one team will gain a toehold and slowly exploit this toehold to gain greater and greater control in the game. At the beginning, though, the gains are small. But over time a small advantage can be exploited to make larger and larger gains.

Understanding Space: Zones of Control

Each ball has a zone around it where the opposition cannot place any balls. If ball 1 is an out ball, you can't play ball 1 onto the field and leave it sitting next to ball 2. There is a zone around ball 2 that ball 2 controls. <u>Good teams understand where these zones of control are on the field and this guides their captain's instructions.</u>

But how big is a ball's zone of control? It depends greatly on where the ball is and what other balls and gates are around it.

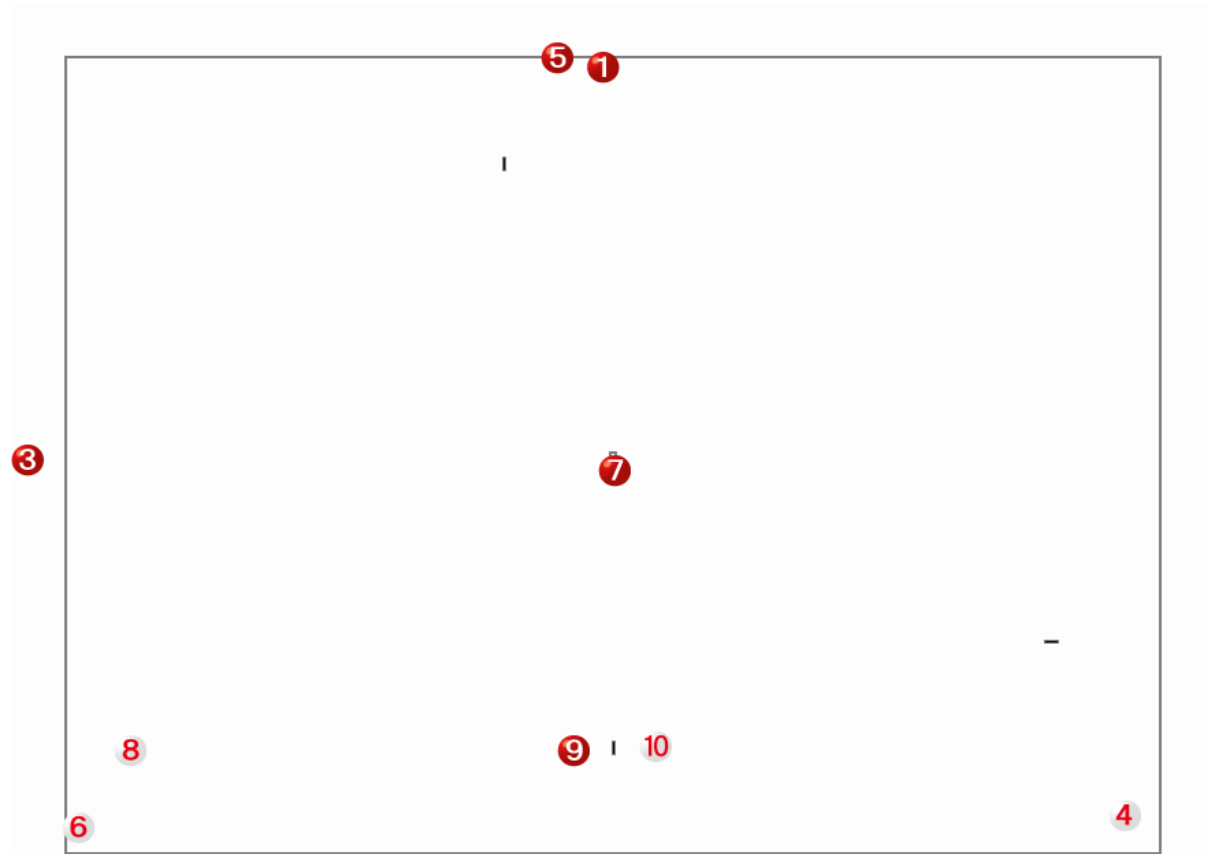An out ball has no zone of control – it can't make a touch.

A single ball by itself has a small zone of control – defined by the skill of the player but probably no more than a few metres in any direction. Notice, though, that the zone of control probably isn't circular. It is much harder to touch a ball that is near a line than to touch one in the middle of the field. The zone of control can't extend over the sideline, but the presence of a sideline also reduces the zone of control by making shots more difficult.

A ball with another ball positioned just in front of it has a much larger zone of control. It can perform a slide. Depending on the position of the balls, it may be plausible to slide in either direction, depending on needs. This greatly extends the zone of control.

A ball sitting in front of a gate has a larger zone of control again. It can score the gate, but with the depth varied as desired. The ability to control the depth of the first shot creates a large zone of control. A ball that has not yet come onto the field has a very large zone of control. Because the stroker has the choice of where to place the ball before attempting gate 1, this allows the stroker to choose the angle through the gate, as well as the depth, increasing the zone of control beyond that of a normal gate pass.

A ball that is likely to score a gate-touch with its next shot has the largest zone of control of all. For a good player, the zone of control after scoring a gate-touch is most of the field.

Exercise 1: *Consider the court diagram below. First, assume ball 1 is next to play, what is ball 1's zone of control? Next, instead of ball 1, assume ball 2 was next to play with all balls in the same positions. What is ball 2's zone of control? Then ball 3, etc. Which balls have large zones, which small? Which is largest? Which smallest?*

		Court surface: undefined
0-point ball:	2	Turn: undefined
1-point ball: ① ③	4 6 8 10	Stroker: undefined
2-point ball: ⑤ ⑦ ⑨		Time left: 15 min 00 sec
3-point ball:		Points: 8 vs 4
5-point ball:		Comments: Gate-touch 9 on 10

When you are assessing zones of control, you need to remember that the balls are not likely to be in the same positions when their turn arrives. The captain needs to anticipate the likely position of the balls will be in when each ball gets to play. We'll return to this idea in due course – but we need to understand a few other concepts first.

Although this is not always true, it is very likely that a ball with a large zone of control is exposed to opposition attack. Hiding a ball tight to the line protects that ball from being touched, but often at the expense of reducing that ball's zone of control. Being further out from the lines makes a ball more vulnerable, but also makes it possible to score gates more easily.

Understanding the situation in the game is pivotal. If your ball is comparatively safe from opposition attack, it should be placed away from the line near the line of the gate to make passing gates and scoring gate-touches easier. The more at risk your ball is, the closer you should position it to the line.

Understanding Probability: Making Shots and Making Your Own Luck

A shot in Gateball fundamentally has two elements: direction and weight. Put another way, a shot is composed of which line you hit the ball along and how hard you hit the ball. These two can be thought of as completely independent choices.

Gateball is a game where difficult shots must be analysed probabilistically. Most captains will already be doing this instinctively, even if they don't know they are.

When assessing a shot you must consider:

- The likelihood of success.

    o The most likely **gain** from a successful shot.

- The implied likelihood of failure.

    o The most likely **outcome** from a failed shot.

Notice that a successful shot yields a gain, but a failed shot gives an outcome – not necessarily a loss. A savvy captain will assess the outcomes of both success and failure before attempting a shot. Not all "failed" outcomes are bad.

Obviously, sometimes a failed shot is a poor outcome. Attempting to touch an opponent's ball and missing rarely ends well. Yet sometimes a "failure" can be a success! We've all played shots aiming to touch one ball, and instead hit another ball that happened to be in the vicinity. This is the most obvious example of the concept, but there are others.

Because a "failed" shot normally means a missed gate or missed ball, it will often result in the end of turn for the stroker. So where do you want to leave your ball?

An assessment of how hard to hit the ball is often the critical factor you can control, even in a failed shot. Understanding and manipulating where the ball will finish if you miss the shot can be a crucial way to mitigate the damage caused by a failed shot.

A good place to leave your ball is right near a sideline. This is the logic behind the common instruction "go for gate 2, deep down to the far line". If the ball makes the gate there's a significant

gain, but if the ball misses it will often land safely deep behind gate 2. But that's not the only good place to accidentally leave your ball.

A more nuanced understanding of a difficult shot would be: Where will the ball finish if the shot is missed and where are the zones of control on the field? It's very important not to leave your ball in one of the opposition's zones of control. But are there any of your own balls with zones of control that you might finish in? If so, that's a great place to "accidentally" leave your ball. Instead of being touched by the opposition and sparked out, your "cost" of failure might be to be touched by a team-mate and sparked into a nice position. Or it could be even better.

The other factor is that gateballers can "make their own luck". Quite often a lucky outcome is at least plausible – if you do the things that make the luck possible. Once again, this is often about how hard to hit the ball, not what you aim at. Let's say you have just come through gate 1 and you wish to hit a ball that is half-way between you and gate 2. Gate 2 is also a target, of course. The two targets are roughly, though not perfectly, in line. Let's say there's a 60% chance you would make the shot on the ball and your normal attempt on the ball would finish a couple of metres short of gate 2. Would you take a 60% chance of success?

Well, make your own luck! Hit the ball a little harder than normal so that missing the ball and making the gate – by luck – is at least possible. If you hit the ball harder you now have a 60% chance of touching the ball, and maybe a 15% chance of making gate 2. That's now a 75% chance of success on the shot! That's a big improvement just from understanding the most likely outcomes if you fail in your primary target and knowing to hit the ball a little harder than normal.

Exercise 2: *Consider the court diagram below. Ball 1 has already scored gate 2 and already touched Ball 3. Ball 1 would like to touch ball 5 and set a gate-touch for ball 3. Is this shot safe? How do you make it safe? Pay attention to zones of control. What other "luck" could you make for yourself?*
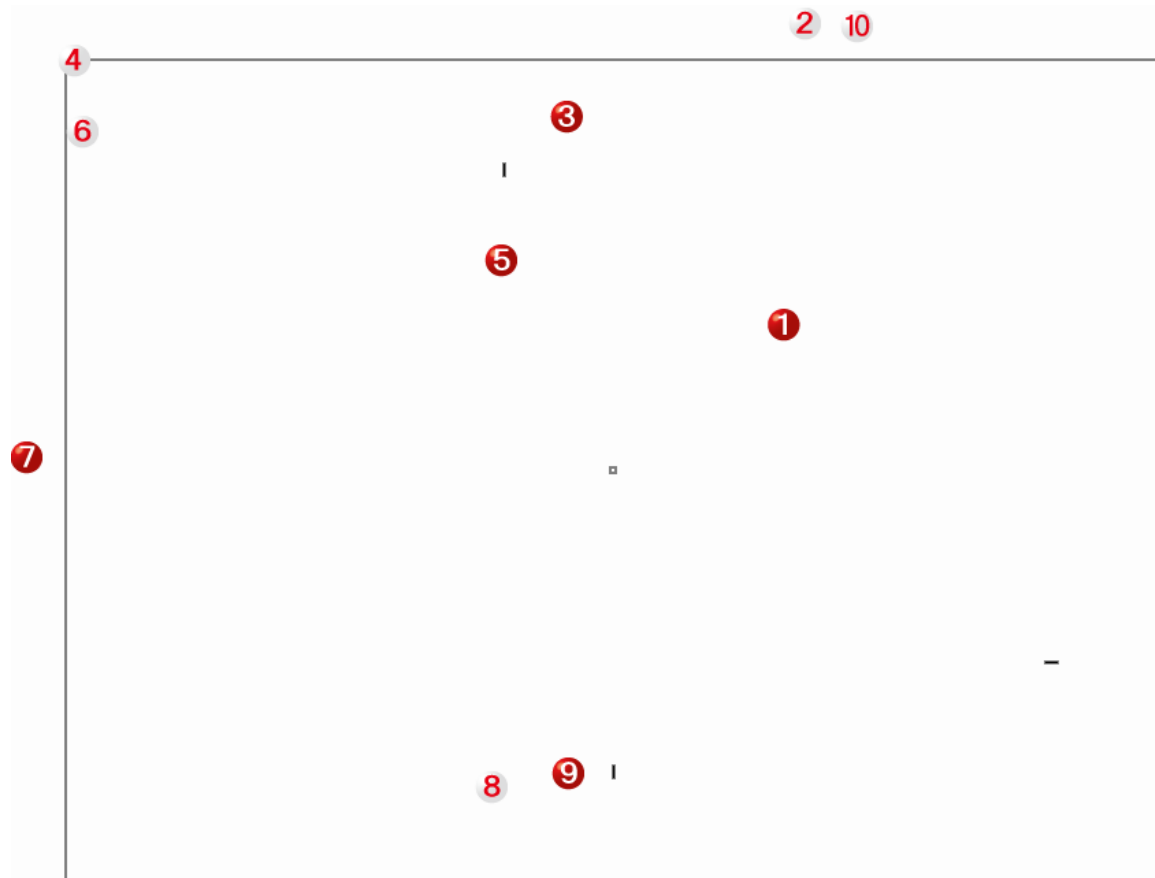
								Court surface: undefined
0-point ball:								Turn: 3
1-point ball:	③ ⑤ ⑦		2	4	6	8	10	Stroker: undefined
2-point ball:	❶				⑨			Time left: 20 min 00 sec
3-point ball:								Points: 7 vs 5
5-point ball:								Comments: 9 to 10 GT is on

Understanding Touches: Much More Than a Spark

You should already have realised from the discussion above that even a short touch extends a ball's zone of control. It offers the ability for a ball to deliberately hit one side or the other of a target ball. This extends the zone of control in two different directions.

But it has other benefits too. If you touch one of your own teammates, you gain an extra TWO shots for your team. First, is the spark to reposition the ball you touched, second is the ability to make a second shot with the stroker's own ball. Both of these can be very powerful in many circumstances.

The ability for a ball to move whilst not the stroking ball allows for rapid changes in the zones of control.

A touch also allows the stroker's ball to turn a corner, or double back on itself. A ball that is behind the gate it is attempting to score at can move in front of the gate by making a touch, then score the gate. It's not just about the ability to make the gate or not. If both balls are on the scoring side of the gate, the ability to change the angle at which the gate is scored can give a massive increase in the zone of control.

Also check the section called "The Three-Ball Gate Touch".

Exercise 3: *Consider the court diagram below, ball 1 to play. At first glance the teams look relatively evenly matched, perhaps white might even be slightly ahead. After all, there are only 2 red balls on the field, compared to 3 white balls. However, first impressions are wrong. Red should win the game easily here with clever, but simple, shots from the two out balls: 1 and 5. Where should balls 1 and 5 be played such that red takes a dominant position? Hint: the advantage is not in what plays ball 1 and 5 make, but in what these positions allow for other players on their team. Bonus credit: What does Ball 2 do? Does it have any good options? Why?*
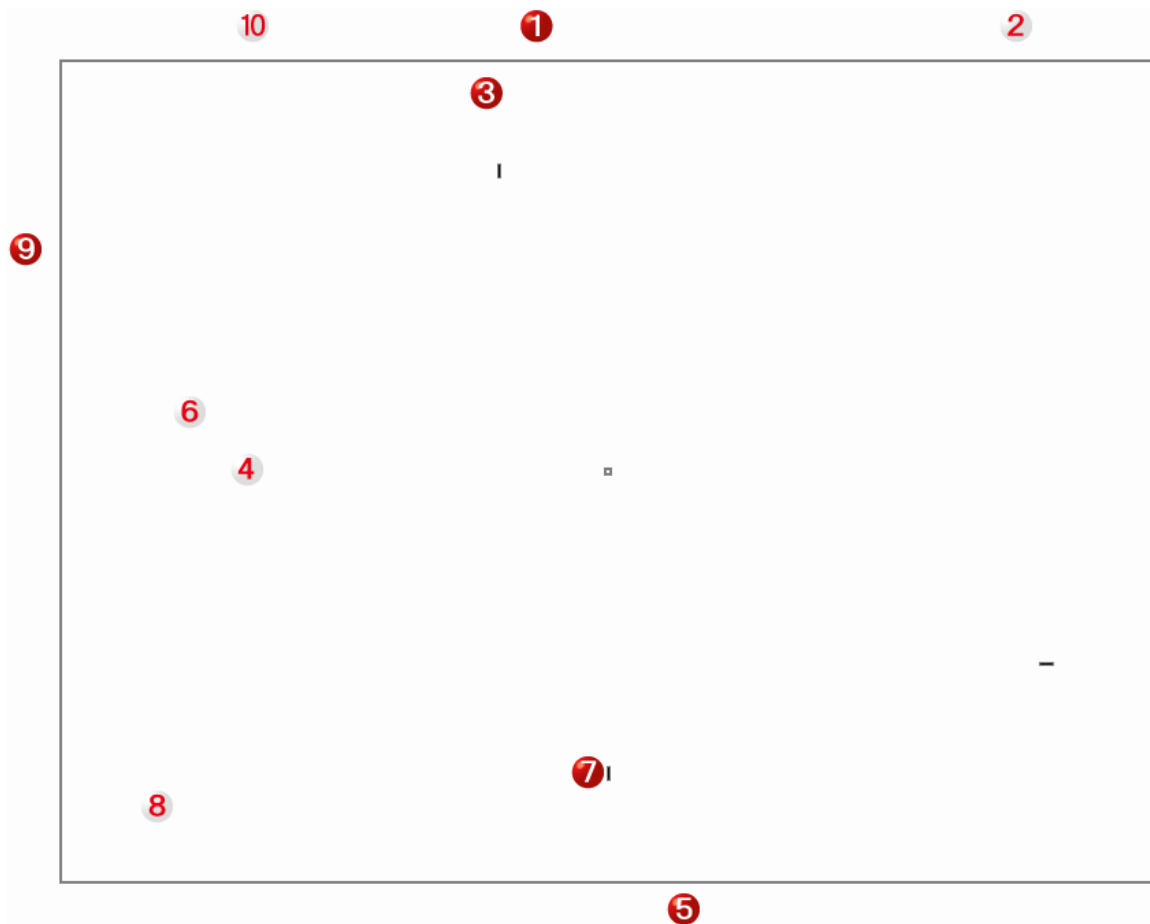
0-point ball:

1-point ball: ❶ ❸ ❺   ❾ 2 4 6 8 10

2-point ball: ❼

3-point ball:

5-point ball:

Court surface: undefined
Turn: 3
Stroker: 1
Time left: 15 min 00 sec
Points: 6 vs 5
Comments:

Understanding Space and Order: Dynamic Zones of Control

When you touch one of your own balls, you give that ball the ability to move outside of the regular turn order. When a ball is "mobile" like this, it is a very powerful and dangerous ball.

How powerful and how dangerous can often depend on how many opposition balls will play between the touch of your own ball and that ball's turn. Ball 1 touching Ball 9 is not particularly helpful. Ball 1 touching ball 3 is very powerful – it gives the White team only one ball to respond to ball 3's new position. Should ball 2 happen to be out of bounds, or hidden on the far side of the field, then Ball 3 can exert control over most of the court.

For example, if Ball 2 is out of bounds and Ball 1 touches Ball 3, then Ball 3 can be safely sparked literally anywhere on the field. It can be put right in front of the gate, or with ball 4, or with a cluster of balls.

But that's not the only thing to consider. If Ball 1 and Ball 3 are both near gate 2 and Ball 2 is tucked safely near the line at gate 3, then Ball 3 is very safe right in front of gate 2. Sure, there's a chance Ball 2 could make a cross-court touch. But probablitistically, Ball 3 will be safe right in front of gate 2.

From a team perspective, the most important ball in gateball is the next ball to play. So a ball slowly gets more and more important as it's turn draws closer, then, once it's turn finishes, that ball is right at the back of the queue.

This cycle of slowly climbing the order of importance and then dramatically falling needs to be understood.

Controlling – and taking the important spaces on the field

Not all areas on a field are created equal. There's a reason that almost all teams playing red will aim to put Ball 1 near the line and near gate 2. That's a very important piece of gateball real estate. The aim of the Red team here is to immediately put gate 2 in their zone of control. White usually takes control of gate 3 for similar reasons. But the early part of the game will be red trying to score as many points as possible while the white team tries to win control of Gate 2.

This early jockeying for Gate 2 is very common – but not the only time and not the only place the same scenarios play out. The same strategies work regardless of which particular piece of court the teams are aiming to control. Now we understand what a zone of control is, we can think about how to invade the other's teams zones!

There are many ways to invade a space the other team already controls. The strategies can be thought of as coming in three flavours, based on how complicated they are to achieve.

Simple techniques to take over a space on the field

1. **Sending a ball into an unoccupied zone.** We've all done this. When ball 1 goes to gate 2 in the first round, they are taking control of an unoccupied zone.

2. **Making a long-distance, low-percentage or "Maverick" shot**. These are low percentage, last-gasp plays. Sometimes they work – but not often.

These two approaches are both very simple to understand and so don't particularly warrant any further analysis. Other than choosing when to attempt a low-percentage shot, there's not much to think about.

3. **Bridges.** Creating a series of stepping stones. This is fairly simple, but requires a significant number of balls to make happen.

4. **Gate-touches.** Scoring a gate-touch or touch-gate allows a ball to cross from gate 2 to gate 3 (or vice versa) and remove opposing balls at the other gate.

5. **Sliding.** Also known as rushing. Hard to do - but devastating when done right. Comparatively low risk in that a failed slide allows an ability to retreat back.

These standard techniques are slightly more complicated but by and large they are relatively well understood. Most captains should be aware of these plays. Australian captains, for the most part, set up for these plays when they are appropriate and also monitor their opposition to see when they are likely to use these plays.

Advanced techniques to take over a space on the field

6. **Numerical play – also known as an attack ball.** This refers to the ability of a team to spark a ball to a new area and have the sparked ball play before any other balls in the vicinity do.

These advanced tactics are not currently well executed in Australia.

Some teams will take advantage of a numerical tactic if one presents itself. That's good and should be encouraged, but also moved beyond. Very few teams will actively look to create a numerical play from nothing as a deliberate stategy.

It is common to deliberately place a ball behind a gate seeking a gate-touch, but it is much less common to deliberately place balls in pairs seeking to create an attack ball. If Ball 5 is an outball, the correct place to spark Ball 6 is anywhere that Ball 4 can touch it.

This argument doesn't only exist for attack balls, though. Too often the question of "where do I put a ball to keep it safe?" is answered only on geometric level. To be safe a ball should be near the line. However, what about placing the ball into the zone of control of one of the other balls on your team? That ball is just as safe as a ball near the line. It might also create more opportunities down the line. As we discussed above, each touch creates two more shots for your side.

Turn Order: A Cycle of Power and Co-operation

There's an expression in finance: "stock prices go up the escalator, then down the lift". It refers to the fact that prices rise slowly and consistently for long periods, then tend to fall very quickly in a short space of time.

The power of a ball in gateball does the same thing. After a ball has just finished playing it is the weakest ball on the court. Then it slowly becomes more and more important. Eventually, it's

playing in three balls' time, then two balls', then it's the next ball to play. Then it plays, then it is back to the bottom of the heap.
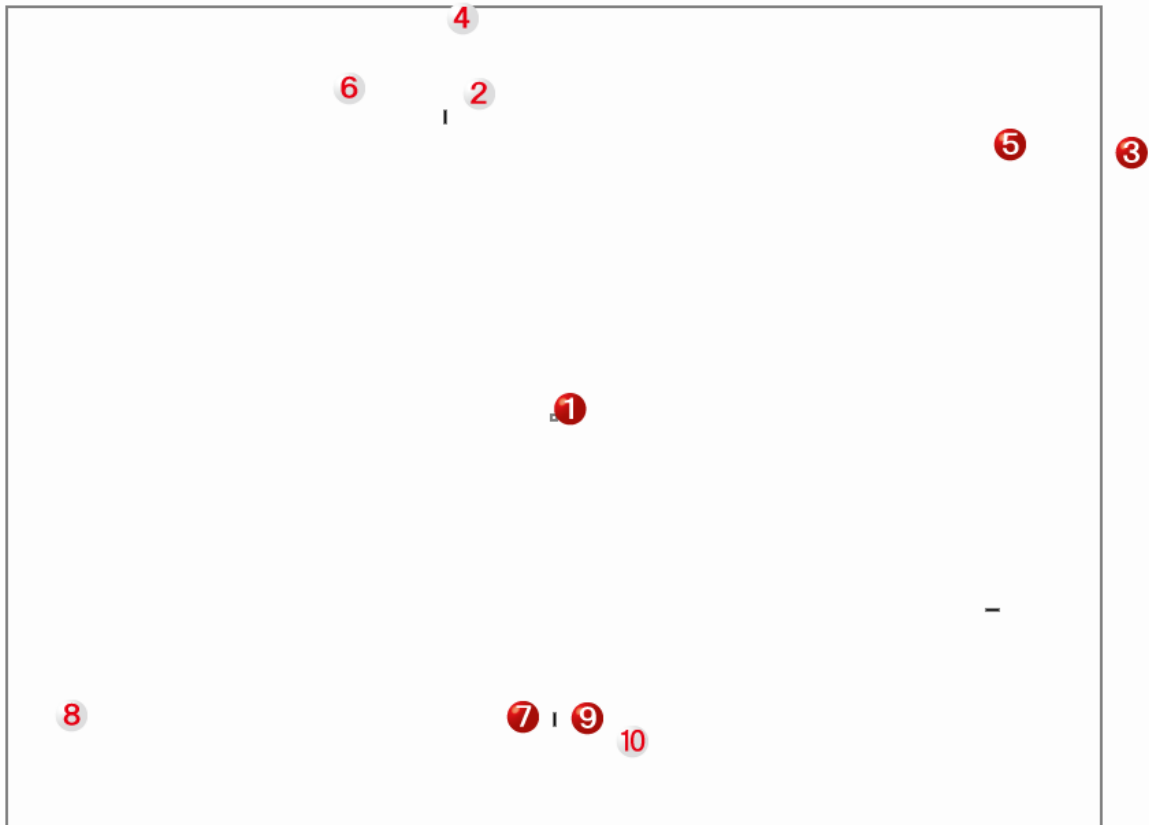
There is a need to think about which balls in the next few turns are going to have the most impact. Direct your attention at these balls, rather than balls on your own team that are not going to play for a long time.

An important corollary to this is that a ball which is not playing soon should be used by your own team – to provide slides, gate-touches etc – before it is sent to where it should be when it plays. Sending a ball to a position and hoping it will still be there many turns later when it finally plays is a poor strategy. It is better to send balls to where they need to be only just before they need to be there.

A cluster of balls provides the stroking ball with more opportunities. By prematurely placing a ball in the position you want it to be when it plays, you are robbing other members of your team of the balls they need to get the most out of their turns.

You need your powerful balls, that is the balls playing soon, to have the support they need. As a general rule it is better to have a fairly powerful play immediately than a slightly stronger play in 5 balls' time.

Exercise 4: *Consider the situation below, with Ball 2 to play. A few things should jump out. The first is the obvious gate touch for Ball 7. However, that's a fair while into the future – there are five balls to play before then. Ball 2 has no gate-touch, but can easily score the gate and then easily touch Ball 6. It would be really great if Ball 6 could be sparked to Ball 7 – you could probably even steal the red-team's gate-touch! But the key question is when should such a spark take place? What is the danger if 6 goes to 7 too early? What can 6 do before it plays to prevent that outcome?*

0-point ball:							Court surface: undefined
1-point ball:				2	4		Turn: undefined
2-point ball:	5	7			6	8	10	Stroker: 2
3-point ball: 1	3		9				Time left: 15 min 00 sec
5-point ball:							Points: 13 vs 8
							Comments:

Interesting side note: Clearly the better strategy is to use ball 6 as part of a three-ball gate-touch for Ball 4. If the gate touch is successful, this allows 4 to spark 6 to 7, then clear Ball 5 off the field. But notice that the threat of the gate-touch is enough to alter the game. If Ball 6 is sent to gate 3 and Ball 4 has nothing, then Ball 3 can be slide ball for Ball 5. Even the threat of a possible gate touch for Ball 4 means that 3 must be placed more conservatively and can't provide the slide ball, improving the chance that ball 6 survives the long shot from 5.

Clusters: A Flock of Sheep or a Pack of Wolves?

Gateballers are often told to avoid clustering their balls. This is understandable, to a degree, but misses a great deal of the possibilities in gateball.

For teams with weak skills, a cluster is a dangerous position, because the chances are that eventually the opposition will socre a gate-touch and then come and remove all your balls.

But as your own skills get better you will be able to use the cluster of balls to create many more attacking opportunities than with single balls dotted around the field.

Drill: 3 Turns, 10 Points.   Place all 5 balls from one team in a cluster in font of gate 2. You have 3 turns to score 10 points. It's relatively easy conceptually – just use ball 1 to spark all the balls through to a similar depth. Use Ball 3 to spark them all over in front of gate 3. Then ball 5 to spark them all through gate 3. If ball 5 manages to agari afterwards, it's actually 12 points…

A cluster of balls has a number of advantages.

First, it has the requisite 3 balls needed to create the 3-ball gate touch (see that section).

Second, because a cluster has more balls, it means that each turn one of your balls is playing, preventing attack balls being sent to you (hopefully).

Third, a cluster of balls means that more numerical combinations are possible. We noted above that attack balls can be very powerful if there is a gap in the order of the other team. You can't spark ball 3 to the white cluster if ball 2 is in that cluster. However, the more balls you have near each other, the more likely you are to have the important touch. Was it ball 6 that was just accidentally hit out – then the important touch is 5 on 7. If all the balls are near each other, you have a much greater chance of making the undefended touch come about.

When a game develops "duelling clusters" it is very important to keep track of gaps in the number order. Where are the gaps in the opposition cluster that allow you to attack them? Were are the gaps in your own cluster that allow them to attack you?

Understanding Geometry: The Ice-Cream Cone of Opportunity

Consider the situation where a stroker is attempting to leave their ball sitting on an exact spot. But using the probabilistic analysis we discussed above - what happens if you miss? Are you equally likely to end up in a circle around your intended target? No. In fact, your shot is likely to end up somewhere in the ice-cream cone of opportunity!

The Ice-cream Cone of Opportunity

To achieve the difficult outcome of leaving a ball on an exact spot, a stroker must hit the ball in the right direction, and with the right distance. New players will have trouble with both. However, as players become more advanced they are more reliably able to hit the ball straight - but they normally still struggle with hitting the ball an exact distance.

The result is that an attempt to leave a ball on an exact spot is much more likely to finish noticeably too short or noticeably too far past the target, but on the right line, than it is to finish at the right distance but noticeably left or
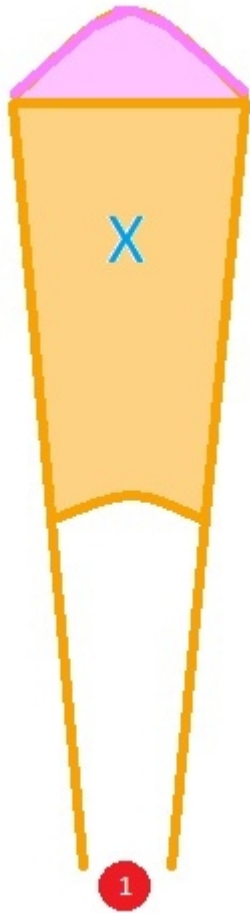
noticeably right of the target. If you plot these outcomes, you get the ice-cream cone.

Most players would already be aware of this at least on a subconscious level (see Exercise 3 below).

As a captain, it's worth remembering this shape every time you ask a player to make a shot that might end their turn. If all the elements of the ice-cream cone are good outcomes, then it's a safe shot to make.

Most players intuitively understand this. Consider a ball which is 5 metres behind gate 2 but sitting right on the side-line and another ball sitting 5 metres out from gate 2, but at a perpendicular to the side-line. Which ball has a better chance of being hit to guard gate 2 safely? That's the ice-cream cone in action!

What about lawns which are less true?

Double balls. Larger targets.

Understanding Angles: The Three Ball Gate Touch

Strategy: From an analysis to a game plan

Analysing the balls.

Playing to the conditions.

Strategy: What to do when you win control?

Strategy: Balancing Risk against Score

Mobile Balls.